

CF1 Working Group C

Charge 6: Identify infrastructure common to direct dark matter searches and explore strategies to deliver it.

**** Materials***

**** Common Technologies***

**** Underground Space***

**** Computing and Software***

**** General***

Wiki pages:

<http://www.snowmass2013.org/tiki-index.php?page=GrpC>

Mailing list: SNOWCF1C via LISTSERV@slac.stanford.edu

Phone meeting (1 to date)

Bob Jacobsen

Jodi Cooley

Jeter Hall

Sunil Golwala

Toni Empl

Ed Hungerford

Bob Jacobsen

Jelena Maricic

Harry Nelson

Rupak Mahapatra

Dennis Wright

Michael Kelsey

Bernard Sadoulet

Reina Maruyama

Eric Hoppe

Underground Space

- Compilation of Underground Real Estate presently available worldwide, and outlook for the space available and potentially available over the next decade. (Liaison with Capabilities)
- Compilation of future underground space needs for dark matter experiments, including depth requirements, size and shielding

Materials

- Compilation of screening facilities available worldwide, listed by type and sensitivity to major radioactive contaminants. (Liaison with Capabilities and with AARM)
- Evaluate future screening needs and match to availability of facilities
- Explore strategies for delivering it
- Explore materials sourcing, tracking and storage space needs
- Explore strategies for shared knowledge (e.g. Universal Materials Database)

Common Technologies

- Explore water shield common needs: Water processing, safety, tankage
- Radon assay & mitigation
- Low background PMTs: Alternate sources
- Calibration: Common sources, particularly neutrons (coordinate with other groups)
- Cryogenics: Common safety and information
- Underground safety: Techniques, organizational methods

Computing and Software

- Summarize state of Simulation tools (code, files, physics lists)
- Explore means of delivering common simulation tools and establishing links with developers from FLUKA, GEANT4, MCNPX, Sources, MUSUN, etc etc. (Liaison with AARM)
- Explore closer connection between simulation and material information
- Explore means of delivering common DAQ and experimental control systems
- Explore means of delivering common data processing, storage and access frameworks

Next steps:

Teleconference this coming week
Develop outline & work allocations
(Needed by end of March....)

Still need people
Specific sections
To connect to other efforts

Rough draft sections over next 6 weeks or so